

University of Applied Sciences

# Degree Courses

## Language of instruction

The language of instruction in all the **THB degree courses is GERMAN**. Individual modules are taught in English. A prerequisite for studying here is knowledge of German at C1 level, which must be proven with a certificate before enrolment, e.g. DSH, TestDaF. THB offers a German course at C1 level for applicants (15 weeks).

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## Bachelor Degrees

Applied Computer Science (B.Sc.)

### Study abroad // English lectures // International career opportunities

The Applied Computer Science degree course is an internationally oriented degree course and includes a semester abroad. Our aim is to allow German students to prepare for their semester abroad through a selection of English language courses as well as to offer foreign students a sufficient range of English language courses during a one-semester stay during the degree. The international degree curriculum is based on the content of the Bachelor of Computer Science. As a result, the same careers and job profiles are open to graduates, alongside the added bonus of international experience.

Application deadline	Winter semester: 31.08.
Degree	Bachelor of Science
Form of study	Full-time
Duration	6 semesters (3 years)
Accreditation	Yes (ASIIN e. V.)
Numerus clausus	No
Possible Master's degree courses	Computer Science (M.Sc.), Digital Media (M.Sc.)

### More information about this degree course

## **Admission requirements**

Foreign applicants have [special admission requirements and a different process of application](#).

## **Language of instruction**

The language of instruction in all the THB degree courses is GERMAN. Individual modules are taught in English. A prerequisite for studying here is knowledge of German at C1 level, which must be proven with a certificate before enrolment, e.g. DSH, TestDaF. THB offers a German course at C1 level for applicants (15 weeks).

## **Modules offered**

The module contents cover the entire breadth of computer science, with particular focus areas in cloud and mobile computing and intelligent systems as well as the area of digital media. There are various learning formats e.g. projects, group work and practical laboratory courses, but also classical lectures, exercises, seminars. Special laboratories with modern technology are available for this purpose. Tutorials optimally support you in your achievements.

## **Project**

For THB students studying ACS, project work already starts in the first few days of the course with the PST, project-oriented studies. Projects form an integral part of our teaching during the further course of studies. Example topics can include:

- Design, construction and programming of robots
- Design of interactive films
- Creation of mobile applications such as augmented reality apps for orientation and navigation in buildings

## **Course profile**

During the first two study semesters you are taught the basics of computer science, programming and digital media, among other things. By selecting English language courses, you will be prepared for a successful semester abroad. From the third semester on you can choose from a wide range of elective modules, depending on your interests. In the 4th semester, diverse foundations and specialist knowledge are linked to laboratory projects, which are carried out in small teams. The 5th semester is intended as the semester abroad at one of our partner universities or a university of your choice. A special seminar prepares you for the semester abroad. The degree is completed in the 6th semester with a practice project, which is usually carried out in a company, as well as the Bachelor thesis.

## **Equipment**

15 special laboratories with modern technology are for instance available for practical work. Examples include the humanoid robots "David" and "Eve" as well as other robots, an in-house recording studio, the latest camera technology (S3D stereo rig with Red cameras, DSLR cameras), app programming smartphones and many PCs/MACs as well as hard and software, where learning can become practice.

## **References/partners**

Here are just a few examples of our partners abroad:

- Finland: University of Oulu, Savonia University of Applied Sciences
- Iceland: University of Reykjavík
- Norway: The Norwegian University of Science and Technology
- Austria: FH Vorarlberg University of Applied Sciences
- Sweden: Blekinge Institute of Technology
- Scotland: University of the West of Scotland
- Spain: Universidad de Las Palmas de Gran Canaria
- Poland: Politechnika Lodzka, Collegium Da Vinci

## **Career prospects**

There are career prospects in all areas where IT is used, for example in the development and adaptation of hardware and software systems, in audio/video design, with Internet service providers, etc... Anyone who has already worked internationally while studying can also show skills beyond their professional qualification: International and social competences, initiative, mobility, dialogue, flexibility and curiosity. These are all qualities that are becoming more and more important in a globalised economy.

Business Administration (B.Sc.)

## **Founding // Managing // Controlling**

The degree course provides you with a solid basic business education with a high degree of practical relevance. You can set an individual focus, be that controlling, taxing, marketing, logistics, SME management, personnel or even economic as well as IT-related topics.

The Bachelor of Business Administration attaches particular importance to promoting the entrepreneurial thinking and actions of the students. Starting your own business? You will get the necessary tools for this here.

In addition to subject-specific expertise, the degree course also strengthens key

competences in the areas of strategic, sustainable and solution-oriented thinking and acting, project management, team leadership and communication.

Other special features include small working groups, a close relationship to [Business Informatics](#), an integrated, 10 week practical project during the 5th semester as well as the opportunity to work on real projects (e.g. business plan, project management, practical thesis).

## University rankings

What makes the Bachelor of Business Administration stand out is our special link to industry: For example, more than half of our students write their thesis in close cooperation with a company. Read more about it in our current ranking results ([PDF](#)).

Application deadline	Winter Semester: 31.08.
Degree	Bachelor of Science
Form of study	Full-time or dual study format
Duration	6 semesters (3 years) for a full-time degree course
Accreditation	Yes (FIBAA)
Numerus clausus	No
Possible Master's degree courses	Business Administration (M.Sc.)

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## More information about this degree course

### Career prospects

After successfully completing the Bachelor of Business Administration, graduates have access to a wide range of activities in companies from a variety of sectors (e.g. industry, trade and services) as well as in public administrations, associations and other organisations.

Depending on their chosen specialisation, students can prepare themselves for a later career in the areas of marketing, controlling, personnel, logistics, taxing or the management of small and medium-sized enterprises.

The orientation of the degree course also provides particularly good opportunities in the development of new business areas, the management of small and medium-sized enterprises as well as the foundation and succession of a company.

## Admission requirements

You need sufficient English skills (level B1).

Foreign applicants have [special admission requirements and a different process of application](#).

## Language of instruction

The language of instruction in all the THB degree courses is GERMAN. Individual modules are taught in English. A prerequisite for studying here is knowledge of German at C1 level, which must be proven with a certificate before enrolment, e.g. DSH, TestDaF. THB offers a German course at C1 level for applicants (15 weeks).

## Contents of the degree course

The Bachelor degree course is modular:

At the beginning you learn the **fundamentals of** Mathematics, Statistics, Accounting, Business Law and Business English.

During the first semester you will learn how to run and operate companies **through the economic core modules** (e.g. Fundamentals of Entrepreneurial Activity, Production and Material Management, Personnel and Organisation, Marketing and Sales, Accounting, Controlling, Financing and Investment, Economics).

You will **refine your entrepreneurial thinking and actions** in modules such as Business Plan, Project Management, Start-up Management and Business Succession.

The **Studium Generale** allows you to think outside the box and to deal with overarching aspects of corporate governance (e.g. CSR - corporate social responsibility and sustainability, philosophy of science, legal aspects).

With the choice of **specialisation modules** (see last tab) you can set your individual focus in business and economic functional areas from the 4th semester onward.

Varied forms of teaching and learning (e.g. case studies, simulation games, guest lectures) offer variety and strengthen your competence profile beyond pure technical expertise.

Students work with practical activities in numerous teaching modules, such as the integrated practical project during the 5th semester and a thesis in cooperation with a **company**.

## **Internationality/study abroad**

Students can complete a part of their Bachelor's degree course at one of more than 20 partner universities abroad. The 5th semester is best suited as a semester abroad ("mobility window", see [SPO](#) Section 6(7)). The [International Office](#) will assist you in choosing a suitable university abroad.

## **Specialisation/elective modules**

Selection of three **Business Administration specialisations**:

- Controlling
- Service Management and Marketing
- Business Taxation and Auditing
- SME Management
- HR Management
- Logistics

Choice of a specialisation from the subject areas **Economics or Business Informatics**:

- Innovations, Market Power and State Action
- Applied Econometrics
- Enterprise Resource Management (ERP systems)

All specialisations comprise two modules and run over two semesters. This offer is made subject to capacity or organisational changes.

Business Administration (B.Sc., extra-occupational)

**Please note: This part-time format is not possible for applicants who have a study visa for Germany**

## **Flexible // Individual // Practical**

Business know-how is in demand in every company. Regardless of whether it is a small craft business, a hotel or a public administration company.

The extra-occupational Bachelor of Business Administration offers men and women the opportunity to further their education and to obtain a Bachelor of Business Administration from the THB.

Attendance phases at the university and supervised self-study phases alternate.

The lectures take place every two weeks on Fridays and Saturdays. This leaves time for

work and family during the week.

The main location is the THB in Brandenburg an der Havel. For a minimum number of participants, the extra-occupational Bachelor of Business Administration can also be offered at the [Neuruppin](#) location.

### **What is special about the extra-occupational study format?**

This study format combines distance learning and attendance at the THB. During the attendance phases, students come to the university to build on their knowledge.

**Individual//** The degree course is modular. It offers a variety of content-related options and combinations. As a result, it can be designed individually, efficiently and practically.

**Flexible//** The degree course adapts to the needs of the students. You can either take all modules that are pending in the semester, or only select individual modules. As a result, the students control the pace of their studies.

**Practical//** Newly acquired knowledge can be tested and extended through project work and case studies. Students can incorporate their professional experiences and encourage discussion in classroom sessions.

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Application deadline	Winter Semester: 31.08.
Degree	Bachelor of Science
Form of study	extra-occupational, or only individual modules can be selected
Duration	7 semesters (3.5 years) for a full-time degree course
Accreditation	Yes (FIBAA)
Numerus clausus	No
Possible Master's degree courses	Business Administration (M.Sc.), Technology and Innovation Management (M.Sc.)

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### **More information about this degree course**

#### **Career prospects**

Business Administration graduates are needed everywhere. In this respect, many doors are open in various industries after graduation. As an employer, trade, banking, international, public sector, recruitment, insurance or business consultancy, for example, come into

question. There is an especially great need for business know-how in small and medium-sized enterprises (SMEs).

### **Admission requirements**

Foreign applicants have [special admission requirements and a different process of application](#).

### **Language of instruction**

The language of instruction in all the THB degree courses is GERMAN. Individual modules are taught in English. A prerequisite for studying here is knowledge of German at C1 level, which must be proven with a certificate before enrolment, e.g. DSH, TestDaF. THB offers a German course at C1 level for applicants (15 weeks).

### **Contents of the degree course**

The part-time degree course in Business Administration is modular. It offers a variety of content options and combinations. As a result, it can be designed individually, efficiently and practically. The part-time degree course in Business Administration is designed so that the training can be flexibly adapted to a student's occupational burden. Attendance and self-learning phases alternate. Click [HERE](#) to read more.

### **Costs**

#### **For students**

€111 administration fee + €500 media usage fee = €611 semester fee

#### **For module students (only individual modules may be studied here)**

€111 administration fee + module fee (depending on the attendance hours) = semester fee  
Further information and a detailed list of costs can be found [HERE](#).

Business & Information Systems Engineering (B.Sc.)

### **Study digitisation**

Due to the digitisation of society, hardly any business process can function without IT support today. A globally networked digital economy will emerge in the future, which has to be shaped, especially by computer scientists. As a result, business information specialists are in great demand already and will continue to be an indispensable interface between users/decision-makers and technology.



## The most important facts in a nutshell

Application deadline	Winter Semester: 31.08.
Degree	Bachelor of Science
Form of study	Full-time or <a href="#">Dual</a>
Duration	6 semesters (3 years) for a full-time degree course
Accreditation	Yes (FIBAA)
Numerus clausus	No
Possible Master's degree courses	<a href="#">Business &amp; Information Systems Engineering (M.Sc.)</a> , <a href="#">Security Management (M.Sc.)</a>

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## More information about this degree course

### Career prospects

Business & Information Systems Engineering is a young and interdisciplinary subject area with links to computer science and business administration. The subject is unique due to the combination of different knowledge and skills, together resulting in a demanding qualification profile which is highly sought after in the professional world.

The job profile of the Business & Information Systems Engineering specialist is extremely complex and nuanced. Graduates work in all areas of business and society:

- In industry,
- Trade,
- Services,
- Education and
- Management.

Whether it is in management, organisation, sales and marketing, development, consulting or training, business information, specialists are active in various business sectors. With the internationally recognised academic degree "Bachelor of Science", the way is clear for starting a career (20,000 vacancies with growth potential) or for continuing studies in the appropriate [Master of Business & Information Systems Engineering](#) or to become a [security specialist through the Master of Security Management](#).

### Admission requirements

Foreign applicants have [special admission requirements and a different process of application](#)

### Language of instruction

The language of instruction in all the THB degree courses is GERMAN. Individual modules are taught in English. A prerequisite for studying here is knowledge of German at C1 level, which must be proven with a certificate before enrolment, e.g. DSH, TestDaF. THB offers a German course at C1 level for applicants (15 weeks).

### **Contents of the degree course - Business & Information Systems Engineering you can touch**

The contents which are taught in the “Bachelor of Science” in Business informatics (see module sheet) range from economics, computer science and the special contents of business informatics, are also referred to as the three pillars of business informatics. Students specifically qualify with special competences for the design and optimisation of company information and communication systems. This includes assessing the application potential (e.g. big data) of new technologies such as the Internet and increasing mobile communications in the age of Industry 4.0. As a result, the course is set for activities in:

- Management consultancy,
- User Support,
- Information or Knowledge Management,
- System Development or Project Management,
- Organisation and Systems Analysis.

Students particularly appreciate the broad spectrum of training and the diversity of career prospects associated with it. The content of the degree course is aimed at people interested in economics and computer science/technology, with a deliberate move away from theoretical computer science, special mathematics and the specialisations of economics. Instead, the Business & Information Systems Engineering degree course deals with:

- Information management
- Software Engineering,
- System Integration and
- Management of Business Processes.

### **Business & Information Systems Engineering (B.Sc.) at THB**

Studying at the Brandenburg University of Applied Sciences means studying at a multi-award-winning, family-friendly, young and modern university located in the immediate vicinity of the capital city Berlin. The accredited (FIBAA) Bachelor of Business Informatics is regularly in the TOP ranks of the CHE ranking. It covers six semesters with a total of 180 ECTS. The first two semesters provide information about business administration and system development as well as techniques in scientific work. Specialised knowledge in computer science for the optimal use of information and communication technologies in companies or administrations complement the rest of the degree course:

- complex application systems,
- cooperative information and knowledge management or
- functional areas of operational application systems (see module catalogue).

You will study according to your individual life situation in one of these two formats:

1. Full-time degree course,
2. Dual degree course

Computer Science (B.Sc.)

## **Cloud and Mobile Computing // Digital Media // Intelligent Systems**

Our world is now unimaginable without computer science applications. The special competence of trained computer scientists lies in the analysis, conception, development and configuration of hardware and software systems as well as embedding them in existing environments, planning and organisation or in the adaptation of system and application software. The subject spectrum of the degree ranges from network, internet-based and mobile systems in the field of [cloud and mobile computing](#) to image recognition, artificial intelligence, embedded systems and robots in the field of [intelligent systems](#) and the production of videos, computer games and web applications in the area of [digital media](#). As part of the degree, individual and freely selectable specialisations are combined with each other as part of a proven interdisciplinary approach.

Application deadline	Winter Semester: 31.08.
Degree	Bachelor of Science (180 CP)
Form of study	Full-time or Dual
Duration	6 semesters (3 years) for a full-time degree course
Accreditation	Yes (ASIIN e.V.)
Numerus clausus	No
Possible Master's degree courses	<a href="#">Computer Science (M.Sc.)</a> , <a href="#">Digital Media (M.Sc.)</a>

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## **More information about this degree course**

### **Admission requirements**

Foreign applicants have [special admission requirements and a different process of application](#)

### **Language of instruction**

The language of instruction in all the THB degree courses is GERMAN. Individual modules are taught in English. A prerequisite for studying here is knowledge of German at C1 level, which must be proven with a certificate before enrolment, e.g. DSH, TestDaF. THB offers a

German course at C1 level for applicants (15 weeks).

### Modules offered

The module contents cover the entire breadth of computer science, with particular focus on cloud and mobile computing and intelligent systems as well as the area of digital media. There are various learning formats e.g. projects, group work and practical laboratory courses, but also traditional lectures, exercises, seminars. Special laboratories with modern technology are available for this purpose. Tutorials optimally support you in your achievements.

### In-depth profiles

Starting in the 3rd semester, you can pursue your particular interests in computer science by choosing one of the following in-depth profiles:

- Cloud and Mobile Computing (CMC)
- [Digital Media \(DM\)](#)
- [Intelligent Systems \(IS\)](#)

A variety of modules from the elective catalogue are assigned to each profile. At least 4 modules must have been successfully completed from a profile in order to be recognised as a profile in the Diploma Supplement.

### Cloud and mobile computing

The aim of the course in Cloud and Mobile Computing (CMC) is to convey the technical basics of mobile applications and systems as well as cloud computing based on a computer science foundation. In addition to the development of applications for different mobile operating systems, special emphasis is placed on the user-friendly design of the applications.

Sample study plan profile CMC, Bachelor of Computer Science

#### 3rd semester

Human-Computer-Interaction and/or  
alternative programming paradigms  
Basics of Cloud Computing

Basics of Cloud Computing

#### 4th semester

Mobile Applications  
and Systems  
Database  
Programming  
Security of Mobile  
and Distributed  
Systems

#### 5th semester

Cross-Device  
Interaction  
Enterprise  
Applications  
Software Quality

(Selection of at least 4 subjects is necessary for recognition of the CMC profile)

## Digital media

Our modern information society needs creative minds who can bridge the gap between design and computer science in the development of innovative media applications. Digitisation has now permeated all areas of media production. Regardless of whether we consume media on the Internet, on data carriers such as DVD or Blu-ray, in the cinema, TV or radio, at info terminals or with apps on mobile devices, as an OnDemand service or even as a classic print product, these services are always based on the complex processes of digital production, distribution and archiving. A targeted design, intuitive interfaces that are dynamically generated by content management systems, or computer games with responsive level and character design as well as complex game logic programming are just a few examples of the close links between design and information technology which professional multimedia productions are known for today. Creativity and aesthetic judgement are required alongside the ability to technically realise and reflect the social impact of new media technologies.

Sample study plan Bachelor of Computer Science, with a digital media profile

<b>3rd semester</b>	<b>4th semester</b>	<b>5th semester</b>
Computer Animation	Basics of Interactive Media	Media Psychology and/or Cross-device Interaction
Basics Audio and Video	Digital Filming	Media Technology Audio and/or Multimedia Production

(Selection of at least 4 subjects is necessary for recognition of the DM profile)

## Intelligent Systems

Numerous companies are concerned with how computers handle the exponential growth of data volumes and how machines can make human-like decisions and recognise relationships between data. Online retailers, for example, are trying to predict future buyer behaviour based on past purchases. Data mining is concerned with discovering unknown patterns in huge amounts of data. Specifically, this can be about very different things such as credit card misuse, medical diagnoses or the recognition of opinions and trends in web forums. In the field of decision-making support, medical systems mimic the decision-making of human experts and their use as an aid in clinics and practices can mostly go unnoticed.

A large number of the intelligent system algorithms come from natural models in nature: These include optimisation methods analogous to nature, artificial neural networks and evolutionary algorithms.

(Selection of at least 4 subjects is necessary for recognition of the IS profile)

## **Project-oriented learning**

Project-oriented learning refers to directly linking theory and practical application to real problems. For THB computer science students, project work already starts in the first study days with the project-oriented study (PST). Project-oriented learning is also an integral part of further studies, starting with strengthening, practice-accompanying projects in the complex internship during the 4th semester, the large project in the 5th semester, and the practical project in the 6th semester. Example topics can include:

- Design, construction and programming of robots
- Design of interactive films
- Creation of mobile applications such as augmented reality apps for orientation and navigation in buildings
- Creation of web-based tools
- Examination of hardware platforms and software tools for the Internet of Things
- Examination of eye tracking data

## **Equipment**

15 [special laboratories](#) with modern technology are for instance available for practical work. Examples include the humanoid robots "David" and "Eve" as well as other robots, an in-house [recording studio](#), the latest camera technology (S3D stereo rig with Red cameras, DSLR cameras), app programming smartphones and many PCs/MACs as well as hard and software, where learning can become practice.

## **References/partners**

We are distinguished by our practical orientation. We work closely with companies in the region and other universities.

## **Career prospects**

There are professional prospects in all areas where IT is used, for example in the development and adaptation of hardware and software systems, in audio/video design, the creation of computer animations, Internet service providers, in the development of mobile and distributed applications, in the field of artificial intelligence and autonomous mobile systems.

E-Mobility (B.Eng.)

## **Electrical engineering + Mechanical Engineering = Drive**

In 25 years, the Department of Engineering has built up competencies in the field of

electrical and mechanical drive technology, which come together in the new E-mobility degree program. With this study program, we are meeting the modern challenges future engineers will face who must master the integration of systems from different fields for new products and technologies - in this case mechanical engineering, electrical engineering and control engineering.

The E-mobility degree course is characterized in particular by the teaching of knowledge, methodological skills and working techniques in a professionally balanced representation of the technical systems required for this.

E-mobility includes all technical devices or processes that set people or goods in motion or support muscle-driven movements by means of electric motor drives. The "mobile" energy storage systems will (have to) adapt to the level of technical development.

The term electromobility is intended to cover a wide range of applications:

- Vehicles < 1 kW (pedelecs, cargos, e-scooters, speed bikes, trikes),
- Vehicles up to 300 kW (typical for passenger cars, hybrids, plug-in hybrids...),
- Battery e-locomotives (rail drives),
- Transport and handling systems (working platforms, hoists, mobile platforms...),
- Exo-skeletons (knee drive, stair climbing aids...),
- Drone propulsion systems (safety aspects, mapping, 3D capture).

One of the possible "technical" answers to counteract the critical climate changes lies in the technology change of vehicle drives. This means that electromechanical drive technology and energy storage systems will play a key role in all transport sectors. Mobility change will then not mean substituting the internal combustion engine with an e-motor in the car, but offering diverse, flexible and efficient forms of mobility.

Application deadline Winter semester: 31.08.

Form of study Full-time or dual

Duration 7 semesters (3.5 years)

Numerus clausus No

Accreditation In preparation

## **More information about this degree course**

### **Admission requirements**

Foreign applicants have [special admission requirements and a different process of application](#).

## **Language of instruction**

The language of instruction in all the THB degree courses is GERMAN. Individual modules are taught in English. A prerequisite for studying here is knowledge of German at C1 level, which must be proven with a certificate before enrolment, e.g. DSH, TestDaF. THB offers a German course at C1 level for applicants (15 weeks).

## **Course profile**

In the first two semesters, the mathematical-scientific and engineering fundamentals are taught. Each module concludes with an examination. The study achievements of one semester comprise 30 credits. In the 3rd to 6th semesters, in-depth knowledge is taught in compulsory and elective modules.

Projects carried out in small teams are an integral part of the program. Students learn to familiarize themselves independently with a new topic, to organize themselves in a group and to take responsibility for individual areas of the project. Individual study phases can be completed at foreign universities in order to gain language and intercultural competence and to signal mobility. In the 7th semester, students complete a practical project, which is usually carried out in an industrial company.

The Bachelor's thesis marks the conclusion of the degree course.

## **Career prospects**

- Development
- Construction
- Commissioning
- Manufacturing
- Quality management
- Sales and Marketing
- Service
- Technology oriented consulting or appraisal

in the following areas:

- Automotive industry
- railroad technology
- aerospace industry
- shipyard industry, telecommunication and IT companies
- energy companies
- as well as in application-oriented research

## **Modules offered**

The degree course offers a broad spectrum of engineering science modules that enable



students to develop effective and efficient solutions to the respective problem field. From the 4th semester onwards, elective modules can be selected.

## **Projects**

By working on practical problems, students can practically review and apply the knowledge they acquired during their studies. The development of solutions in a team is in the foreground.

## **References/partners**

Thanks to this practical training, we cooperate with science and industry both regionally and nationally. The specialist and practical skills of students are strengthened by working on practically-orientated questions.

Engineering Sciences (B.Eng.)

## **Automation Technology // Electrical and Information Technology // Mechatronics // Optoelectronics**

In this engineering degree, students receive practical training in a key area of German industry. Following joint foundational studies, there are two fields of study, each with two main focuses.

The Electrical Engineering study programme offers exciting insights into sensor technology, electronic circuits as well as system design and offers good career opportunities, also at regional companies.

The focus on [Electrical and Information Engineering](#) is supplemented by communication technology and data security.

The study focus on [Optoelectronics](#) additionally deals with photonics and microsystems technology.

In the study of mechatronics/automation technology, students can choose between two major fields of study: [Mechatronics](#) and [Automation Technology](#). Within mechatronics, students gain knowledge of vehicle technology, dynamic systems and actuators.

Automation technology focuses on the control, regulation and monitoring of processes in industry and in buildings. Additional qualifications in business administration, project management and foreign languages complete the engineering degree.

<b>Application deadline</b>	for the winter semester 31.08.
<b>Degree</b>	Bachelor of Engineering
<b>Form of study</b>	Full-time, dual
<b>Duration</b>	7 semesters (3.5 years)
<b>Accreditation</b>	Yes (ASIIN e.V.)
<b>Numerus clausus</b>	No
<b>Pre-study internship</b>	recommended

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## More information about this degree course

### Admission requirements

Foreign applicants have [special admission requirements and a different process of application](#).

### Language of instruction

The language of instruction in all the THB degree courses is GERMAN. Individual modules are taught in English. A prerequisite for studying here is knowledge of German at C1 level, which must be proven with a certificate before enrolment, e.g. DSH, TestDaF. THB offers a German course at C1 level for applicants (15 weeks).

### Course profile

In the first two semesters, students are taught mathematical and engineering fundamentals. There is an exam at the end of each module.

The academic achievements of a semester comprise 30 credits. From the 3rd to 7th semester, compulsory modules provide in-depth knowledge in the major individual fields of study.

Projects carried out in small teams are an integral part of the degree course. The students learn to work independently with a new topic, to organise themselves in a group and to take responsibility for individual areas of the project. Individual study phases can be completed at universities abroad in order to gain language and intercultural competences and to indicate mobility. In the 5th semester students complete a practical project, which is usually carried out in an industrial company.

The degree course is completed with the Bachelor thesis.

### Career prospects

Development, construction, commissioning, manufacture, quality management, sales and marketing, service, technology oriented consultation or assessment in the following areas: Automotive industry, railway, aerospace, or shipbuilding industry, manufacturing and building automation, laser technology, microsystems technology, information and

### **Modules offered**

The degree course offers a wide range of engineering modules which enable students to work out effective and efficient solutions to their respective problem areas. Elective modules can be selected from the 3th semester according to your specialisation.

### **Projects**

By working on practical problems, students can practically review and apply the knowledge they acquired during their studies. The development of solutions in a team is in the foreground.

### **References/partners**

Thanks to this practical training, we cooperate with science and industry both regionally and nationally. The specialist and practical skills of students are strengthened by working on practically-orientated questions.

Industrial Engineering (B.Eng.)

### **Economics // Technology // Interdisciplinary Character**

Industrial engineering students at THB can study both topics. They explore technology and economics in almost equal proportions and apply an interdisciplinary attitude throughout their studies.

The degree course addresses both engineering science and economics. Economic and engineering study contents convey the different ways of thinking, questions and technical languages. The ability to carry out interdisciplinary work is central. The goal of the degree course is to work independently to be able to solve tasks that require knowledge from both areas.

Professionals who are knowledgeable in both technology and economics are in great demand on the job market. Specialists who have an understanding of cross-sectional tasks are needed in companies. This demand is met by trained industrial engineers. The classical field of responsibility is broad and always lies where the cross-sectional knowledge of commerce and engineering is required.

Industrial engineers may for example deal with:

- Calculation of the profitability of a technical project
- Clarification of financing
- Planning and securing smooth and cost-effective production
- Planning and monitoring of material usage and energy consumption

- Optimising the use of facilities
- Optimising work processes
- Creation of market analyses
- Evaluation of ongoing projects
- Product planning and marketing of high quality technical goods and systems.

The areas of application in industry and service companies are correspondingly versatile, including work in accounting firms and management consultancies.

<b>Application deadline</b>	for the winter semester 31.08.
<b>Degree</b>	Bachelor of Engineering
<b>Form of study</b>	Full-time, dual
<b>Duration</b>	7 semesters (3.5 years)
<b>Accreditation</b>	Yes (ASIIN e.V.)
<b>Numerus clausus</b>	No
<b>Pre-study internship</b>	recommended

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## More information about this degree course

### Admission requirements

Foreign applicants have [special admission requirements and a different process of application](#)

### Language of instruction

The language of instruction in all the THB degree courses is GERMAN. Individual modules are taught in English. A prerequisite for studying here is knowledge of German at C1 level, which must be proven with a certificate before enrolment, e.g. DSH, TestDaF. THB offers a German course at C1 level for applicants (15 weeks).

### Course profile

Divided into three stages: Basic engineering and economics studies, core subject phase in economics and technology and profile phase in economics and technology

### Career prospects

- Automotive/vehicle industry
- Chemical and plastics industry
- Electronic industry
- Iron, metal and engineering industry
- Service companies (accounting firms, consulting)
- Transportation

## **Project**

By working on practical problems, students can practically review and apply the knowledge they acquired during their studies. The development of solutions in a team is in the foreground.

## **References/partners**

Due to the practical training we have close cooperation with science and economic partners both regionally and nationally. The specialist and practical skills of students are strengthened by working on practically-orientated questions.

## **Economics compulsory modules**

- Business Administration I (fundamentals and organisation)
- Business Administration II (operations and production)
- Business Administration III (financing and investment)
- Business Administration IV (marketing and sales)
- Accounting I (external accounting)
- Accounting II (internal accounting)
- Macroeconomics
- Law

## **Economics specialisation modules**

### **Specialisation A**

Subject controlling

- Strategic Controlling
- Operative Controlling
- Specialist Start-up Financing
- Principles of Start-up Financing
- Financing Competence in the Start-up Context

### **Specialisation B**

subject Contractual and Product Liability

- Intellectual Property
- Liability Law
- Supply Chain Management
- Corporate Logistics
- Traffic Logistics

IT-Security (Online, B.Sc.)

**Please note: This online format is not possible for applicants who have a study visa for Germany**

### **Online // Flexible // Part-time**

The ongoing digitization of many areas of life has made complex, networked IT systems indispensable for the functioning of our world today. But as the size and interconnectedness of systems grows, so do the security risks: New hacker attacks, data leaks and security-relevant hardware or software errors become known almost daily. Today, companies, but also entire cities or even states can be largely paralyzed by targeted attacks on critical information infrastructures. Our individual freedom and privacy are also increasingly at risk.

In the online degree course IT Security you will acquire a sound basic knowledge of computer science (e.g. programming, operating systems, computer networks). Building on this, the course focuses from the outset on aspects of the organizational and technical protection of information infrastructures. You will know the "state of the art" and learn suitable methods for the systematic solution of security problems. The aim of the study program is to provide you with the necessary technical and methodological knowledge you need for a successful career as IT security specialists.

Application period	Winter semester: 31.08.
Degree	Bachelor of Science
Form of study	Online, full- or part-time
Duration	6 semesters (3 years) for a full-time degree course
Accreditation	<a href="#">Yes (ASIIN e.V.)</a>
Numerus clausus	No
Possible Master's degree courses	<a href="#">Online degree in Media Informatics (M.Sc.), Computer Science (M.Sc.), Security Management (M.Sc.)</a>

**More information about this degree course**

## **Admission requirements**

Foreign applicants have [special admission requirements and a different process of application](#)

## **Language of instruction**

The language of instruction in all the THB degree courses is GERMAN. Individual modules are taught in English. A prerequisite for studying here is knowledge of German at C1 level, which must be proven with a certificate before enrolment, e.g. DSH, TestDaF. THB offers a German course at C1 level for applicants (15 weeks).

## **Modules offered**

The degree offers medially prepared study modules, which provide you with competences from mathematics (15 ECTS), computer science (75 ECTS), security (65 ECTS) as well as interdisciplinary fields (25 ECTS).

## **Costs**

Each module/course costs 78 euros in media procurement fees (BAföG recipients (proof required) pay 53 euros per course), a total of 29 courses x 78 euros = 2,262 euros for the entire course, plus semester fees of 111 euros per semester.

## **Organisation online consultation/attendance**

Each module offers weekly online consultation hours, generally between 6pm and 9pm. The exact dates for the respective course will be announced via [Moodle](#).

Attendance hours are module-specific and specified in the module handbook as well as the study and examination regulations. During these hours, the students come together in the group to apply and deepen the knowledge they have acquired.

## **Credits for academic achievements**

It is possible for enrolled students to have content from previous education and training credited to the Online IT Security degree (B.Sc.). An [application](#) for the recognition of study achievements must be submitted for this.

Please note the following: Applications for recognition can generally only be made once and only at the start of the degree course. Students who have already studied at a German university are required to complete the application for the recognition of study credits in full and to submit it to the student secretariat (unsuccessful attempts must also be indicated!).

Projects are also an integral part of our teaching during the online degree. Example topics can include:

- Security analyses and penetration tests of existing systems
- Development and implementation of technical or organizational protective measures
- Creation of an IT security concept for a company
- Development or investigation of security tools

The practice/project phase in the 5th semester builds on the students' theoretical knowledge and offers a practice-oriented addition. This is carried out in a company or other professional institution ("project office") and is supervised by the university.

### **Course profile**

A sound basic knowledge acquired at first will be expanded upon with the two major fields of study "computer science and SW development" and "digital media" in elective courses. The degree offers a variety of teaching forms, e.g. 1-2 face-to-face meetings per semester, online consultation hours, meetings in virtual seminar rooms, media-based self-learning modules, use of the "Moodle" teaching-learning system as well as asynchronous support by e-mail and through forums.

### **Career prospects**

The demand for IT security specialists in business and administration is already very high today and will continue to increase in the future. This degree program opens up a wide range of career prospects in almost all industries. Your tasks can have both technical (including development/implementation of IT security and defense measures, penetration tests, development of secure software) and organizational focuses (including IT security officer, compliance with security standards and data protection regulations).

Mechanical Engineering (B.Eng.)

### **Mechanical Engineering // Energy and Environmental Engineering**

Students can choose between the fields of general mechanical engineering, and energy and environmental engineering.

Within the study of **Mechanical Engineering** modules are offered which aim to provide the broadest possible knowledge of mechanical engineering (product development, design, calculation, simulation).



Within the study of [Energy and Environmental Engineering](#) modules are offered which cover environmentally friendly energy conversion technologies (power generation, heating and cooling technology or automotive drives).

The theoretical skills acquired are supported by a multitude of experiments in modern machine laboratories as well as by an industrial practical semester which offers practical experience.

<b>Application deadline</b>	for the winter semester 31.08.
<b>Degree</b>	Bachelor of Engineering
<b>Form of study</b>	Full-time, dual
<b>Duration</b>	7 semesters (3.5 years)
<b>Accreditation</b>	Yes (ASIIN e.V.)
<b>Numerus clausus</b>	No
<b>Pre-study internship</b>	recommended

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## More information about this degree course

### Admission requirements

Foreign applicants have [special admission requirements and a different process of application](#)

### Language of instruction

The language of instruction in all the THB degree courses is GERMAN. Individual modules are taught in English. A prerequisite for studying here is knowledge of German at C1 level, which must be proven with a certificate before enrolment, e.g. DSH, TestDaF. THB offers a German course at C1 level for applicants (15 weeks).

### Course structure

**1st and 2nd semester:** joint training in scientific fundamentals, choice of field of study is open

**3rd and 4th semester:** Development and additional learning of scientific and engineering fundamentals, beginning specialisation in the chosen field of study

**5th semester:** 20-week internship in a mechanical engineering, energy or environmental technology company. Alternatively: Semester abroad at a partner university, e.g. University of the West of Scotland

**6th semester:** Deepening specialist knowledge in the chosen field of study

**7th semester:** Team project, specialisation module (block course) and Bachelor thesis.

### Career prospects

Employment as a developer, designer or engineer in preferably small and medium-sized enterprises; Integration in the engineering department of larger companies with opportunities for advancement; Foundation of start-ups with innovative ideas.

Bachelor graduates are primarily concerned with the development and design of components, machines, systems and processes, e.g.:

- in the vehicle and automotive industry
- in plant and special machine construction
- in drive and conveyor technology
- for energy suppliers
- in applied research
- in energy and environmental technology

### Projects

Practice-related projects play an important role in the degree course.

**3rd semester:** In the branch of general mechanical engineering, you will work on a development task (e.g. sailing vessel model) in teams of four. You will design, calculate and document the product with technical drawings. This is followed by parts manufacturing in our workshop, commissioning and testing (typically with an open day competition). In this project, you will use the basic knowledge you have already acquired and experience your first success in engineering.

**5th semester:** You will work on an engineering task in a company of your choice, and then you will tell your fellow students about it in the 6th semester.

#### **7th semester:**

In the team project (module M6), you will work on a self-selected project from your practice (at a company) or from research at the THB within a period of 8 weeks. You will tell your fellow students about the results in a colloquium.

With the Bachelor thesis (12 weeks) you will prove that you can work independently on technical tasks from industrial practice using scientific methods.

Media Informatics (B.Sc., online programme)

**Please note: This online format is not possible for applicants who have a study visa for Germany**

## **Online // Flexible // Part-time**

Our modern information society needs creative minds who can bridge the gap between design and computer science in the development of innovative media applications. As a result, media informatics deals with the conception, development, introduction and operation of hardware and software systems for the production, distribution and use of (digital) media. The aim of the degree is to give students a good start in their career with a degree that focuses on practical skills in the areas of: Software, web and database development, content management, documentation, editing, computer graphics/animation, planning, design and development of media-oriented software systems and media as well as management consulting.

Application period	Winter semester: 31.08.
Degree	Bachelor of Science
Form of study	Online, full- or part-time
Duration	6 semesters (3 years) for a full-time degree course
Accreditation	<a href="#">Yes (ASIIN e.V.)</a>
Numerus clausus	No
Possible Master's degree courses	<a href="#">Online degree in Media Informatics (M.Sc.)</a> , <a href="#">Computer Science (M.Sc.)</a> , <a href="#">Digital Media (M.Sc.)</a>

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## **More information about this degree course**

### **Admission requirements**

You can be admitted to the Bachelor of Computer Science degree if you have successfully completed your Abitur (school leaving examination), your Fachhochschulreife (advanced technical college certificate) or your subject-related university entrance qualification.

Foreign applicants have [special admission requirements and a different process of application](#)

### **Language of instruction**

The language of instruction in all the THB degree courses is GERMAN. Individual modules are taught in English. A prerequisite for studying here is knowledge of German at C1 level, which must be proven with a certificate before enrolment, e.g. DSH, TestDaF. THB offers a German course at C1 level for applicants (15 weeks).

## **Modules offered**

The degree offers medially prepared study modules, which provide you with competences from mathematics (15 ECTS), computer science (75 ECTS), media (65 ECTS) as well as interdisciplinary fields (25 ECTS).

## **Costs**

Each module/course costs 78 euros in media procurement fees (BAföG recipients (proof required) pay 53 euros per course), a total of 29 courses x 78 euros = 2,262 euros for the entire course, plus semester fees of 111 euros per semester.

## **Organisation online consultation/attendance**

Each module offers weekly online consultation hours, generally between 6pm and 9pm. The exact dates for the respective course will be announced via [Moodle](#).

Attendance hours are module-specific and specified in the module handbook as well as the study and examination regulations. During these hours, the students come together in the group to apply and deepen the knowledge they have acquired.

## **Credits for academic achievements**

It is possible for enrolled students to have content from previous education and training credited to the Online Media Informatics degree (B.Sc.). An [link studium/pruefungen-terme/formulare/\\_blank](#) - "Opens internal link in current window">application</link> for the recognition of study achievements must be submitted for this.

Please note the following: Applications for recognition can generally only be made once and only at the start of the degree course. Students who have already studied at a German university are required to complete the application for the recognition of study credits in full and to submit it to the student secretariat (unsuccessful attempts must also be indicated!).

## **Project**

Projects are also an integral part of our teaching during the online degree. Example topics can include:

- Development of web presences
- Mobile app design
- Planning, conception and development of media-oriented software systems

The practice/project phase in the 5th semester builds on the students' theoretical knowledge and offers a practice-oriented addition. This is carried out in a company or other professional institution ("project office") and is supervised by the university.

### **Course profile**

A sound basic knowledge acquired at first will be expanded upon with the two major fields of study "computer science and SW development" and "digital media" in elective courses. The degree offers a variety of teaching forms, e.g. 1-2 face-to-face meetings per semester, online consultation hours, meetings in virtual seminar rooms, media-based self-learning modules, use of the "Moodle" teaching-learning system as well as asynchronous support by e-mail and through forums.

### **Career prospects**

There are generally career prospects in all areas where IT is used, for example in the planning, design and development of media and software systems, content management systems, in technical editing, as well as in the field of computer graphics/animation or game development.

Medical Informatics (B.Sc.)

### **Healthcare // Cooperation with clinics // Practical training**

The field of medical informatics forms an essential bridge between the areas of modern, science-based medicine and the rapidly developing world of information technology. As a result, it is a focus in the growth of the health economy both on the part of politics and the economy. With the use of state-of-the-art doctor, pharmacy, nursing and hospital information systems, it not only provides users with the information they need for diagnosis and treatment during their daily work, but also generates new knowledge for managing big data and data mining through the use of the latest technologies.

As a result, the aim of this degree is to develop methods and tools for data analysis, image and signal processing as well as the use of mobile sensors for improved health care and provision based on a well-founded basic knowledge of computer science and medicine.

Application deadline	Winter semester: 31.08.
Degree	Bachelor of Science (180 CP)
Form of study	Full-time or <a href="#">Dual</a>
Duration	6 semesters (3 years) for a full-time degree course
Accreditation	Yes (ASIIN e.V.)
Numerus clausus	No

## More information about this degree course

### Admission requirements

Foreign applicants have [special admission requirements and a different process of application](#)

### Language of instruction

The language of instruction in all the THB degree courses is GERMAN. Individual modules are taught in English. A prerequisite for studying here is knowledge of German at C1 level, which must be proven with a certificate before enrolment, e.g. DSH, TestDaF. THB offers a German course at C1 level for applicants (15 weeks).

### Modules offered

In addition to compulsory courses on the foundations of computer science and medicine, the degree stands out due to its large number of elective courses. The following modules are specially designed for the needs of Medical Informatics:

- Basics of Evidence-based Medicine
- Conception and Evaluation of Medical Studies
- Medical Image Processing
- Medical Equipment and its Maintenance
- Medical Information Systems
- Telemedicine
- Knowledge-based Systems in Medicine

This makes it possible for students to study versatile subjects, tailored to their individual interests.

### Course profile

The degree is characterised by a variety of teaching methods: The classic format of studies such as lectures and exercises are supported by seminars, excursions and practical training in small groups in the THB laboratories as well as in various departments in the surrounding clinics. Modules on medical topics are predominantly represented by chief physicians from the clinics.

## Equipment

Two special laboratories ([Biosignal processing lab I](#) and [Biosignal processing lab II](#)) with modern equipment are available for practical work in the field of medical informatics. In addition to ECG, EEG, EMG and ultrasound measuring installations, there are also other mobile sensors for motion detection as well as various hardware and software which can be used to put what you have learned into practice.

## Project

For THB students studying medical informatics, project work already starts in the first few days of the course with the project-oriented study (PST). A topic from the field of medical informatics is handled independently by small groups of 3 to a maximum of 9 students. In addition to various project work in the individual modules, the basic knowledge learned is applied to one research question and practically examined during the medical informatics project (5th semester) individually or in a project group.

The aim of the project work is to deepen the direct practical relevance of the course as well as to improve the team skills of the students. Examples of projects carried out:

- Motion analysis with mobile sensors
- Evaluation of scientific literature on complementary medicine and
- Quality of health information on the Internet

## References/partners

The activities of the college in the field of medical informatics are combined in the Medical Informatics Competence Centre - [ProMedius](#). Its key topics include clinical-scientific data management, biomedical applications in signal and image processing, and telemedicine. Project partners and clinics (e.g. Städtisches Klinikum Brandenburg GmbH), other colleges and technical colleges (e.g. the Brandenburg Medical School Theodor Fontane, the Medical School at the Städtisches Klinikum Brandenburg GmbH or the Otto-von-Guericke University Magdeburg) as well as enterprises from the region (e.g. Roland Consult GmbH, Weist GmbH, vireq software solutions GmbH & Co. KG, ORTEC medical GmbH and the German network for evidence-based medicine) are involved.

## Career prospects

Information technology is now an integral part of all healthcare activities. Career opportunities are therefore becoming available in the IT departments of hospitals, in various software and system providers, and companies in the pharmaceutical and medical device

industries. In addition, the use of telemedical procedures in aftercare and the monitoring of patients with chronic illnesses, as well as the innovative use of data from wearables for health maintenance purposes, opens up a broad field.

Optometry / Optical Device Engineering (B.Eng.)

## Optometry and Optical Engineering

The degree is designed in cooperation with the opticians' and optometrists' guild of the state of Brandenburg in Rathenow. It combines medically influenced optics with engineering knowledge about the workings, design, construction and operation of modern medical devices. The focus is on medical/optical measuring and diagnostic systems.

The research equipment used in optometry today has evolved into highly complex "intelligent" systems. For its successful use with patients, one requires good knowledge of the diagnostic equipment, sound knowledge of the various diseases and refractive errors of the human eye as well as their optimal correction. Special emphasis is placed on a practical and interdisciplinary teaching of the material in this degree. Since teaching takes place in two locations and it is also possible to graduate as an optician in addition to the Bachelor of Engineering degree, the Optics/Optical Device Technology degree is one of the dual study programmes. The degree can address individual learning needs through teaching in small groups. In addition, it is possible to get very personal and individual support.

The degree is divided into the specialisations [optometry](#) and [optical engineering](#), which can be selected from the 5th semester onward. In addition to the Bachelor degree, you can also qualify as an optician.

**Application deadline** for the winter semester: 31.08.

<b>Degree</b>	Bachelor of Engineering optional qualification as optician and optometrist (Handwerkskammer in Germany)
<b>Form of study</b>	Full-time, part-time
<b>Duration</b>	7 semesters (3.5 years) for a full-time degree course
<b>Accreditation</b>	in preparation
<b>Numerus clausus</b>	No
<b>Preparatory course</b>	Optometry preparatory course > see module catalogue of focuses

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## More information about this degree course

### Admission requirements

Foreign applicants have [special admission requirements and a different process of application](#)



## **Language of instruction**

The language of instruction in all the THB degree courses is GERMAN. Individual modules are taught in English. A prerequisite for studying here is knowledge of German at C1 level, which must be proven with a certificate before enrolment, e.g. DSH, TestDaF. THB offers a German course at C1 level for applicants (15 weeks).

## **Course profile**

Diverse, practice-oriented and interdisciplinary forms of teaching, e.g. lectures, practical presentations, seminars, exercises; Linking ophthalmic optics/optometry with optical device technology

## **Career prospects**

Diverse areas of application in the (eye) optical industry: Development, design, manufacture, distribution of (eye) optical devices and corrective agents; Technology consulting; Work in ophthalmic shops and clinics; Leading specialist optical shops with the choice of specialisation in ophthalmic optics.

## **Modules offered**

Modules in the area of device technology, precision engineering and optometry. Elective modules can be selected from the 5th semester according to your specialisation. These can be adapted to changes in practice every year.

## **Projects**

The projects closely relate to business practice. They serve the learning of independent task processing. The development of solutions in a team and as independent action are in the foreground. Example projects include:

- Workshop project
- Research and development project

## **Degree overview**

### **Pre-study internship**

Optometry vocational training or participation in the four-week preparatory course is

strongly recommended, starting in early September.

### **Enrolment**

annually for the winter semester

### **Regular study period**

7 semesters

### **Study contents**

1st to 4th semester

ophthalmic and engineering fundamentals

5th semester

12 week practical phase and start of the subject-specific specialisation

6th and 7th semesters

subject-specific specialisation

7th semester

Bachelor thesis

### **Degree**

Bachelor of Engineering, optional qualification as an optician

Alle öffnen Alle schließen

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## **Master Degrees**

Business Administration (M.Sc.)

### **Innovative // Integrative // International**

By studying the Master of Business Administration, you will specialise in selected aspects of management, business management and core business functions. Through the flexible combination of the specialisations offered you have a great deal of creative freedom and can put together your desired professional profile individually.

The degree course places special emphasis on the application of traditional, business disciplines to innovation-related areas, cross-company processes and international contexts.

You have many opportunities to integrate research or practice-oriented project work into your studies. This challenges your initiative, strengthens your analytical, solution-oriented and cross-functional thinking and acting and therefore specifically prepares you for starting a career. Other special features: small working groups, close relationship to [Business Informatics](#), integrated semester abroad.

### **University rankings**

Semester abroad while studying? Why not? The Department of Business and Management strongly supports a semester abroad at one of our numerous foreign partner universities.

Application deadline	Winter semester: 31.08.
Degree	Master of Science
Form of study	Full-time
Duration	4 semesters (2 years)
Accreditation	Yes (FIBAA)
Numerus clausus	No

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## **More information about this degree course**

### **Career prospects**

The degree course trains you as a business generalist with in-depth technical expertise in your chosen specialisations.

With your management competences, you can solve complex business tasks across the board, successfully manage and execute projects and, after starting your career, you can specialise in a functional area (such as controlling, marketing, innovation management, human resource management).

The orientation of the degree course provides graduates with particularly good opportunities for demanding specialist and managerial tasks, e.g. in innovative and international companies from industry, trade and service, in corporate and tax consultancy, and also in medium-sized enterprises in the region.

The Master of Business Administration (M.Sc.) also qualifies you for a doctorate in Germany and abroad.

### **Admission requirements**

The basic prerequisite for admission to the Master of Business Administration is the successful completion of a university degree (Bachelor or equivalent) in business administration or in a technically equivalent area at a university of applied sciences or university.

In addition, sufficient knowledge of English (B2 level) is necessary and in the case of a non-German higher education entrance qualification, you must also demonstrate good German language skills.

Please note:

Foreign applicants have [special admission requirements and a different process of application](#).

### **Language of instruction**

The language of instruction in all the THB degree courses is GERMAN. Individual modules are taught in English. A prerequisite for studying here is knowledge of German at C1 level, which must be proven with a certificate before enrolment, e.g. DSH, TestDaF. THB offers a German course at C1 level for applicants (15 weeks).

### **Contents of the degree course**

In addition to basic modules of Business Administration, Economics and Methodology, the course contains three elective modules in each of the first and second semesters (see below for details).

You flexibly combine classic business management focuses (such as controlling and finance, logistics and supply chain management, human resource management and econometrics, SME management and corporate governance), as well as setting impulses in the following areas:

**innovative:** Questions from innovation-related or technology-related management areas

**integrative:** cross-company and cross-functional solutions

**international:** Application within international and intercultural aspects of management

Various forms of teaching and learning (e.g. case studies, simulation games, guest lectures, research-based learning) allow you to gain scientifically sound, research-oriented training with a high degree of applicability and practical relevance. The third semester can also be used as a semester abroad.

For details on the degree course structure and module descriptions, please refer to the module catalogue in the download area on the right.

## **Internationality/study abroad**

The 3rd semester is intended for an integrated semester abroad at one of our many [partner universities](#). The study abroad can be credited, so that semesters abroad are possible without lengthening the study period.

Information, information events for the preparation of the semester abroad and advice are available from the [International Office](#).

If you have any further questions about the degree course structure, please contact your academic advisor.

## **Specialisation possibilities**

### **Specialisation offers (WiSe)\***

- International controlling and consolidated accounting (A)
- Human Resource Management (A)
- Supply Chain Management (A)
- Market-oriented business management (SME) and information management (B)
- Corporate Finance (B)
- Business-to-Business Marketing (B)
- Technology and Innovation Management (C)
- International Corporate Governance and Corporate Management - Norms and Standards (C)
- Economics of Strategic Behaviour (C)

### **Specialisation offers (SoSe)\***

- International investment controlling and international reporting (A)
- HR Management Research (A)
- Value-Added Management (A)
- Resource-Oriented Business Management (SME) and E-Business (B)
- Corporate Valuation and Financial Modelling (B)
- Logistics Systems in Practice and Applied Logistics Research (B)
- Innovation and Change Management (C)
- International Corporate Governance and Corporate Management - Value Management (C)
- Advanced Applied Econometrics (C)

\*subject to capacity or organisational changes.

Business & Information Systems Engineering (M.Sc.)

## Information Management // Processes // IT Systems

The professional application of information management concepts, the modelling and optimisation of processes in companies and administrations are key skills of a Business & Information Systems Engineering specialist and make up an indispensable part of modern entrepreneurial thinking and acting. The aim of the Master of Business & Information Systems Engineering is therefore to educate specialists and executives who have coped with the challenges of rapidly changing technological and social conditions for IT users, consulting companies and system houses. They have the necessary qualifications to be able to act purposefully and efficiently in this environment.

### The most important facts in a nutshell: enrolment deadline and degree

Application deadline	Winter semester: 31.08.
Degree	Master of Science
Form of study	Full-time, part-time whilst working
Duration	4 semesters (2 years)
Accreditation	Yes (FIBAA)
Numerus clausus	No

### Why should you choose the Master of Business & Information Systems Engineering?

Business & Information Systems Engineering specialists are increasingly entrusted with the implementation of fundamental business decisions in all areas of economy. Consequently, they no longer take on "mere" advisory functions at the management level, but are managers themselves. They no longer assume only professional, but also social and economic responsibility.

Additional qualifications in a wide range of IT, business and social management areas are required to meet this responsibility fully.

Based on the knowledge and skills already acquired in a [Bachelor of Business & Information Systems Engineering](#), this knowledge and these skills can be acquired and trained through a postgraduate course. The THB offers this further education in the form of a Master of Business & Information Systems Engineering.

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### More information about this degree course

#### Career prospects

The field in which graduates of the Master of Business & Information Systems Engineering find employment lies is at the interface between computer science and economics, in particular business administration. It also involves engineering, communication science and operations research. There is a close connection to the areas of materials management, production planning and control as well as logistics.

The graduates of the Master of Business & Information Systems Engineering at THB can be

employed in business and administration.

The demand for outstanding, practice-oriented business information specialists is unwaveringly high. This is partially due to the growing importance of information technology and also due to the fact that the efficient use of information technology is not only a technical challenge. As a result, many companies are looking for qualified employees who are familiar with essential IT concepts and also have in-depth knowledge of business contexts. Since the interface between business administration and computer science is a central field of management, the career prospects of business IT specialists are still outstanding.

There is a stable demand from small and medium-sized enterprises as well as from large companies in the automotive, telecommunications, semiconductor manufacture, consulting and services industries. The Master of Business Informatics at the THB not only offers practice-oriented teaching contents but also conceptual-theoretical knowledge and it also promotes the acquisition of practical skills and abilities. This allows graduates to enter into a professional career quickly and smoothly after graduating. Graduates with dual training profiles are in demand on the job market. There is also a high demand for qualified junior staff in the field of Business & Information Systems Engineering.

### **Admission requirements**

The admission requirements for the Master of Business & Information Systems Engineering are regulated in Section 4 of the Study and Examination Regulations. To be admitted, you must have completed a diploma or Bachelor of Business & Information Systems Engineering at THB. Relevant degrees in Business Informatics or related disciplines of other universities are recognised.

### **Language of instruction**

The language of instruction in all the THB degree courses is GERMAN. Individual modules are taught in English. A prerequisite for studying here is knowledge of German at C1 level, which must be proven with a certificate before enrolment, e.g. DSH, TestDaF. THB offers a German course at C1 level for applicants (15 weeks).

### **Contents of the degree course**

The Master of Business & Information Systems Engineering is divided into three subject areas with three compulsory modules each:

1. Management and Leadership,
2. Information Engineering and
3. Process Management

The combination of compulsory elective modules, of which at least six must belong to at least four of the same profiling and the thematic focus of the Master's thesis, allows students can specialise in one of the three profile directions during their Master studies:

1. Business Application Systems
2. Cooperative Processes and Knowledge Modelling
3. Information Security

Optional compulsory elective modules according to profile direction

**Profile direction: Operational application systems**

- Data Warehousing
- Design Thinking
- Document Management Systems
- ERP Strategy and Development Planning
- Integrated Business Processes with ERP
- SAP WebDynpro and Mobile Reporting with Dashboards

**Profile direction: Cooperative processes and knowledge modelling**

- Application of Semantic Technologies
- Design Thinking
- Digitisation of Knowledge-Intensive Processes
- E-commerce as a Strategic Sales Concept
- Development of Semantic Applications
- Foundations of Semantic Technologies
- Online Marketing
- Social Network Analysis



## Profile direction: Information security

- Design Thinking
- IT Forensics
- Network Security
- Object-oriented Programming with Java 7
- Predictive Analytics and Privacy

Computer Science (M.Sc.)

## Applied Computer Science // Medical Informatics // Research

The Master of Computer Science is consecutive to the Bachelor of Computer Science, Medical Informatics and Applied Computer Science in the Department of Computer Science and Media at the Brandenburg University of Applied Sciences. The aim of the Master's degree course is to deepen and consolidate existing computer science knowledge and to give students the opportunity to specialise in one or more aspects in the broad spectrum of work and research areas within the Department of Computer Science and Media. Possible specialisations include "Security and Forensics", "Network and Mobile Computing" and "Medical Informatics", with each including three compulsory and optional elective modules.

Application deadline	Winter semester: 31.08., summer semester: 15.02.
Degree	Master of Science
Form of study	Full-time and part-time
Duration	4 semesters (2 years) for a full-time degree course
Accreditation	Yes (ASIIN e. V.)
Numerus clausus	No

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## More information about this degree course

### Admission requirements

A Bachelor of Computer Science, Applied Computer Science or Medical Informatics from THB or in a degree course comparable to computer science from other universities

Please note:

Foreign applicants have [special admission requirements and a different process of application](#).

## **Language of instruction**

The language of instruction in all the THB degree courses is GERMAN. Individual modules are taught in English. A prerequisite for studying here is knowledge of German at C1 level, which must be proven with a certificate before enrolment, e.g. DSH, TestDaF. THB offers a German course at C1 level for applicants (15 weeks).

## **Winter and summer enrolment, full-time study**

It is possible to enrol in the Master of Computer Science in the winter and summer semesters; both entry times have their own study plan. In addition to full-time studies, it is also possible to study part-time, which makes it possible to work at the same time. In addition to the recommended part-time study plan, it is possible to arrange individual study plans as required.

## **Course structure**

The standard period of study from the Master of Computer Science is 4 semesters (2 years) of full-time study. The first three semesters of the Master's degree course are characterised by a clear structure and are divided into four levels: One compulsory level (two modules per semester), one specialisation level (one module per semester), one level for research/project studies (one module per semester) and one compulsory elective module per semester.

You will decide on one specialisation at the beginning of the Master's degree course. In-depth specialisations which align with our areas of expertise are offered:

- "Network and Mobile Computing"
- "Security and Forensics"
- "Medical Informatics"

Each module has an attendance of 4 SWS and a workload of 6 credit points for students. Soft skill components e.g. for project management, scientific work and writing, study work, etc. are an integral part of the research/project track and are practised and implemented with specific topics.

The fourth semester marks the end of the degree course and involves writing the Master's thesis and a Master's seminar. The Master's thesis is a final thesis with a colloquium and is worth 27 CP. The Master's thesis is accompanied by a Master's seminar (3 CP), which will be assessed without a grade. The processing time of the Master's thesis is 6 months.

The Master's thesis serves a particular field of employment with a comprehensive topic and the resulting solution of a theoretical, practical or experimental problem. The Master's thesis is intended to show that the student is capable of dealing with a problem within computer science independently and according to scientific methods within a stipulated period of time.

After passing the Master's exam, the students acquire the degree "Master of Science" with a

detailed description of the chosen specialisation and courses in the Diploma Supplement.

## **Project**

Projects are an integral part of our teaching during the degree course. Example topics can include:

- Cloud and mobile computing
- Virtual hospital
- Mobile applications, Kinect and gait analysis
- Detection of acoustic alarm signals with Raspberry Pi
- Forensics - Safety - Data protection - 3D Imaging - Drones
- GameLab
- Indoor positioning and navigation with mobile devices
- Artificial intelligence (e.g. programming the Nao robot)

## **Equipment**

15 special laboratories with modern technology are for instance available for practical work. Examples include the humanoid robots David and Eve as well as other robots, app programming smartphones and many PCs/MACs as well as hard and software, where learning can be tested in practice. Two special laboratories with a lot of equipment are available for practical work in the field of medical informatics. In addition to ECG, EEG, EMG and ultrasound measuring installations, there are also other mobile sensors available for motion detection.

## **References/partners**

We stand out due to our practical orientation. In addition to working with other universities (e.g. the Film University Babelsberg KONRAD WOLF or the Otto von Guericke University Magdeburg), we also work closely with companies in the region.

Digital Media (M.Sc.)

## **Conception and design // Media technology // Interdisciplinary cooperation**

Our modern information society needs creative minds who can bridge the gap between design and computer science in the development of innovative media applications. The Master's degree course teaches in-depth theories, principles and expertise at the interface between media design, computer science and media studies. Students are enabled to

further develop these topics independently and to use them in practice in finding creative solutions to complex problems. This Master's degree course is characterised by its project and research orientation as well as the interdisciplinary cooperation in Germany and abroad, for example with colleges from the Brandenburg region and Berlin, e.g. the Film University Babelsberg KONRAD WOLF in Potsdam-Babelsberg.

Application deadline	Winter semester: 31.08., summer semester: 15.02.
Degree	Master of Science
Form of study	Full-time and part-time
Duration	4 semesters (2 years) for a full-time degree course
Accreditation	Yes (ASIIN e. V.)
Numerus clausus	No

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## More information about this degree course

### Admission requirements

A Bachelor of Media and Computer Science, e.g. Media Informatics, Computer Science with a course profile in digital media, communication design, interaction design or interface design. Lateral entrants e.g. from areas such as architecture, scenography or media studies are also welcome.

Degree courses which have computer science and media-related qualifications totalling 60 ECTS credits are recognised as comparable. Of these credits, at least 20 ECTS must be for computer science qualifications and 20 ECTS for media-related qualifications.

If you have questions about your suitability for the course, please contact the academic advisor.

Please note:

Foreign applicants have [special admission requirements and a different process of application](#).

### Language of instruction

The language of instruction in all the THB degree courses is GERMAN. Individual modules are taught in English. A prerequisite for studying here is knowledge of German at C1 level, which must be proven with a certificate before enrolment, e.g. DSH, TestDaF. THB offers a German course at C1 level for applicants (15 weeks).

### Modules offered

You will be offered a wide range of compulsory and elective modules for specialisation in

areas of digital media. Here you can view the [curriculum](#) to see how the degree course is structured.

## **Project**

The degree course is characterised by its integrated project and research programme in all semesters. The project events are accompanied by theoretical events such as project management, scientific work, entrepreneurship and the theses seminar, which prepares you for your Master thesis. Projects are carried out in partnership with industries from the region, in an interdisciplinary manner with cooperating universities or can be self-defined according to your interests. Project contents could for example be:

- Stereo3D film production
- Virtual & Augmented Reality
- Interfaces of the future with sensors and gestures
- Shader development for computer games
- Simulations with particle animation
- Visual effects (VFX) and compositing
- Photogrammetry with drones
- 3D laser scanning
- 360° film production and projection
- Motion capturing
- Interactive dramaturgy

## **Course profile**

The Master's degree course focuses on two core areas in the diverse fields of application in digital media.

- Interactive Virtual Worlds  
This includes games, VR and AR applications, interactive visualisations and simulations, web applications, room and sound installations or Smart Living.
- Linear Moving Image Media  
This refers to "traditional" video and audio productions in a modern digital production pipeline. The emphasis is put on animation (2D/3D), visual effects (VFX), compositing and colour grading.

Technical and economic developments show that these two areas increasingly converge and stimulate each other with innovative developments.

The degree course is thesis and project oriented. It offers various forms of teaching, e.g. lectures, practical demonstrations, seminars, exercises, case studies, small group work, excursions.

## Equipment

We are very well equipped with current hardware and software laboratories for the practical work in the area of digital media. This includes a recording studio with a speaker booth, AV lab, media production lab, usability lab, MoCap system, greenscreens, lighting technology, the latest camera technology (Stereo3D rig with RED Scarlet-X cameras, Blackmagic Design 4K camera, Canon full format and APS-C DSLR Cameras, 360 ° photo and video camera rigs, various drone systems, numerous lenses, dolly), 3D laser scanners, 3D printers, smartphones and tablets for app programming. Input/output sensor technology: Kinect, Leap Motion, Oculus Rift, HTC Vive, Epson Moverio, Arduino boards, iBeacons, Myo gesture bracelets, where learning can be tested in practice.

Available software packages: Adobe Creative Cloud (Photoshop, AfterEffects, Premiere, Illustrator, InDesign etc.), Maxon Cinema4D, Autodesk Maya and Mudbox, Blender, The Foundry Nuke and Mari, SideEffects Houdini, NextLimit RealFlow, Pixologic ZBrush, Avid Pro Tools and Media Composer, Unity 3D, Unreal Engine, Blackmagicdesign DaVinci Resolve Pro, Eon Vue, Agisoft Photoscan, Allegorithmic Substance Designer, 3D Coat and numerous complementary tools, plug-ins and renderers.

## Career prospects

The career prospects are excellent! The media and creative industries are some of the most dynamic growth sectors in Germany, especially in the media region of Berlin-Brandenburg, and are always introducing new job profiles. With in-depth knowledge of computer science combined with design understanding, you will be well prepared for the requirements of this industry. In addition, the Master's degree course qualifies you for starting your own business and for leading positions in diverse media professions.

Digitalization & Management (M.Sc.)

**Please note: This extra-occupational format is not possible for applicants who have a study visa for Germany.**

## Flexible // Individual // Future-oriented

Due to the interdisciplinary orientation of the Master's degree programme, graduates possess the necessary competences to understand digitalization and its complex effects on companies and organisations, to shape and control them. Therefore, they are particularly suited for demanding leadership and management positions in start-ups, international companies and organisations from e.g. industry, trade, consulting, services or public administration that face the challenges and opportunities of digitalization.

## What is special about the extra-occupational study format?

The extra-occupational study format with teaching units on weekdays in the evenings or on individual weekends makes it easy to integrate the study programme into the everyday lives of working people. The degree programme benefits from a hybrid approach with online and face-to-face phases, small group sizes and a direct line to the lecturers. A large selection of elective modules, which can be combined according to individual needs, round off the study programme.

Application deadline	Winter semester 31.08. // Summer semester 15.02.
Degree	Master of Science
Form of study	extra-occupational, or only individual modules can be selected
Duration	5 semesters (2.5 years) for a full-time degree course
Accreditation	in progress
Numerus clausus	No

## More information about this degree course

### Career prospects

Possible career fields include activities in the areas of innovation management, project management, digital marketing or IT consulting.

The Master's degree in Management & Digitalization (M. Sc.) also qualifies students for a PhD in Germany or abroad.

### Admission requirements

Foreign applicants have [special admission requirements and a different process of application](#).

### Language of instruction

The language of instruction in all the THB degree courses is GERMAN. Individual modules are taught in English. A prerequisite for studying here is knowledge of German at C1 level, which must be proven with a certificate before enrolment, e.g. DSH, TestDaF. THB offers a German course at C1 level for applicants (15 weeks).

As individual modules are taught in English, proof of English at level B2 is required.

## Costs

### For students

€111 administration fee + €2889 tuition fee = €3000 semester fee

### For module students (only individual modules may be studied here)

€111 administration fee + module fee (€750/module) = semester fee

Media Informatics (M.Sc., online programme)

## Online // Flexible // Online Programme

Keywords such as multimedia, apps, gaming and “always online” characterise current developments in our information society. Computer applications and digital media are increasingly merging in the private sector, but also in more and more companies, public administrations and cultural institutions. Diverse professional fields are therefore open to those graduates who are competent in both computer science and digital media. The Master's degree course is consecutive to the Bachelor's degree course of the same name. The aim of the qualification is therefore to expand on knowledge, ability and action in the following areas: Human-computer interaction, novel user interfaces, mobile systems, game production, multimedia teaching, telework, multimedia databases...

Application period Winter semester: 31.08.

Degree Master of Science

Form of study Online, full- or part-time

Duration 4 semesters (2 years) for a full-time degree course

Accreditation [Yes \(ASIIN e.V.\)](#)

Numerus clausus No

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## More information about this degree course

### Admission requirements

Successfully completed first degree course with 60 ECTS in computer science or 60 ECTS with media-related study content.

**Please note: An ONLINE format is not suitable for applicants who come with a study visa for Germany.**

Foreign applicants have [special admission requirements and a different process of application](#).

### Language of instruction

The language of instruction in all the THB degree courses is GERMAN. Individual modules are taught in English. A prerequisite for studying here is knowledge of German at C1 level, which must be proven with a certificate before enrolment, e.g. DSH, TestDaF. THB offers a



German course at C1 level for applicants (15 weeks).

### **Course profile**

The degree course builds on the content of the Bachelor's degree course of the same name. The aim of the degree course is therefore to expand on knowledge, skills and actions in the conception, development, introduction and operation of media-rich computer systems in all areas of applied computer science. The degree course offers specialisations such as "Mobile Computing", "Software Technology", "Human-Computer Interaction" and "Interactive 3D" through a variety of teaching forms, e.g. 1-2 face-to-face meetings per semester, online consultation hours, meetings in virtual seminar rooms, media-based self-learning modules, use of the "Moodle" teaching-learning system as well as asynchronous support by e-mail and through forums.

### **Modules offered**

The four-semester degree course offers prepared media study modules which provide in-depth, interdisciplinary training in computer science, media design and media technology, supplemented by theoretical foundations and interdisciplinary competencies.

### **Costs**

Each module/course costs 78 euros in media procurement fees (BAföG recipients (proof required) pay 53 euros per course), a total of 18 courses x 78 euros = 1,404 euros for the entire course, plus semester fees of 111 euros per semester.

### **Organisation of the online consultation hours**

Each module offers weekly online consultation hours, which generally take place between 6pm and 9pm. The exact dates for the respective course will be announced via [Moodle](#).

### **Credits for academic achievements**

It is possible for students who are already enrolled to have content from previous education and further training credited to the online degree course in Media Informatics (M.Sc.).

An [application](#) for the recognition of study achievements must be submitted for this.

Please note the following: Applications for recognition can generally only be made once and only at the start of the degree course. Students who have already studied at a German university are required to complete the application for the recognition of study credits in full and to submit it to the student secretariat (unsuccessful attempts must also be indicated!).

### **Job profile**

Media and communication are among the growth markets of today and tomorrow. Completely new job profiles have already been created by "multimedia", and others are currently trying to become established in the market. The career area for computer scientists with a focus on media informatics is very diverse. Since almost all areas of computer science are now intertwined with digital media, media computer scientists are now urgently needed in almost every subfield. The spectrum ranges from traditional media sectors, such as press, film and television, to the design and implementation of web systems, the development of teaching-learning systems, games and particularly apps for smartphones and tablets. You can acquire a wide range of knowledge and practical skills in computer science, media, design and psychology in all these areas. This is a competence profile which media informatics in Brandenburg is known for.

### **Project**

The degree course contains a project track with different numbers of projects, some of which also take place within the modules. Example topics can include:

- Development of web presences
- Mobile app design
- Planning, conception and implementation of usability evaluations
- Planning, conception and realisation of interactive 3D applications

In order to prepare the graduates for a possible doctorate, a scientific project and a scientific seminar are integrated into the degree course.

### **References/partners**

We develop and operate these online degree courses together with ONCAMPUS, the University Association of Virtual Universities of Applied Sciences (currently 10 universities).

Energy Efficiency of Technical Systems (M.Eng.)

## Interdisciplinary // Practical // Sustainable

The Master of Energy Efficiency of Technical Systems is unique in Germany and provides graduates of all technical and scientific disciplines with further education in the field of energy efficiency. Building on the specialist knowledge of the respective Bachelor's degree course, this interdisciplinary Master's degree course builds on the focus of energy efficiency. The degree course is consecutive to the Bachelor's degree course from the Department of Technology and further technical Bachelor's degree courses.

Various specialist directions and selected problems such as renewable energy systems, the system design, the building supply technology and issues of automation and simulation of technical systems are covered. Practical experience can be gained as part of an interdisciplinary project, which compliments the content of the Master's thesis.

The aim of the qualification is therefore to expand on knowledge, ability and action in the areas of optimisation, energy management, measurement technology, energy storage, safety and reliability. Graduates are also taught how to solve management tasks and gain the ability to work independently in industry, development and research engineering on a high level.

<b>Application deadline</b>	for the winter semester: 31.08. for the summer semester: 15.02.
<b>Degree</b>	Master of Engineering
<b>Form of study</b>	Full-time, part-time
<b>Duration</b>	3 semesters (1.5 years)
<b>Accreditation</b>	ASIIN e.V. 2015
<b>Numerus clausus</b>	No

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## More information about this degree course

### Admission requirements

All graduates of technical and scientific disciplines who already have a first university degree (Diploma, Bachelor (210 ECTS)) are eligible to apply.

Please Note:

Foreign applicants have [special admission requirements and a different process of application](#).

### Language of instruction

The language of instruction in all the THB degree courses is GERMAN. Individual modules are taught in English. A prerequisite for studying here is knowledge of German at C1 level, which must be proven with a certificate before enrolment, e.g. DSH, TestDaF. THB offers a German course at C1 level for applicants (15 weeks).

## **Course profile**

Interdisciplinary projects in small groups; students work on practical projects of energy efficiency in development teams; choice of specialisation possible through a wide range of elective engineering modules.

## **Career prospects**

Diverse tasks in:

- Energy and environmental engineering
- Automotive engineering
- Process engineering
- Building services engineering
- Automation engineering
- Information and communications technology

## **Modules offered**

- Energy Industry
- Principles of Energy Efficiency
- Mathematical Optimisation and Stochastics
- Project Management and Quality Management
- Automation of Large-Scale Plants
- Energy Aspects of Railway Operations
- Energy Efficiency in Process Technology
- Energy Storage
- Development of Energy-efficient Sensors in Micro Process Engineering
- Design of Energy Efficient Electronics
- Advanced Electronic Systems Lightweight Construction
- Industry 4.0
- Components of Micro Process Engineering
- Management for Engineers
- Modelling and Simulation of Dynamic Systems
- Security and Reliability

## **Projects**

Projects can be carried out in both industrial companies as well as at research institutions and at the THB, whereby the students are involved in ongoing research projects at the university. In this way, project work was also integrated in the design, construction, automation and commissioning of a pilot plant for storing process heat in a medium temperature range.

As a result, students can gain experience in current topics during their studies.

### **References/partners**

- Efficient energy utilisation in the production process of a furniture factory
- Energy efficient lighting through new optical communication technologies
- Continuous heat supply for industrial process heat in a medium temperature range
- Heat recovery systems for waste heat recovery
- Increasing energy and resource efficiency in a food factory
- Increasing the efficiency of a rail vehicle
- Solar ORC process
- Concrete heat storage

Mechanical Engineering (M.Eng.)

### **Dynamics // Simulation // Reliability**

The Master of Mechanical Engineering builds on the specialist knowledge of a basic study in mechanical engineering, mechatronics or comparable disciplines and leads to a higher qualification within the engineering profession at Master's level.

The compulsory modules define the degree course profile with three main focuses:

- Drive systems
- Mechatronics
- Material and structural mechanics

The profile specialisation can be supplemented with assigned technical elective modules. With further choices and interdisciplinary project tasks, broad knowledge and methodological competence is developed in order to pursue a systemic approach in mechanical engineering.

The aim of the degree course is a holistic view of machines in which technical systems of different disciplines are integrated and interact. The mechanical, dynamic and electronic interaction of specific assemblies, issues of stability and reliability, as well as the exchange of energy, materials and information are addressed.

Systemic interactions include power flows, energy conversions, overall efficiency optimisation, dynamic responses, control loop design, fault tolerant software programming, and creative approaches to component design and material selection. The development of integrated systems also includes the consideration of unavoidable disturbance variables and tolerances in order to design the entire, stable and reliable system.

Upon completing the degree course, graduates are qualified to work independently in applied research and development.

### **Application deadline**

### **Degree**

### **Form of study**

for the winter semester: 31.08.

for the summer semester: 15.02.

Master of Engineering

Full-time, part-time

<b>Duration</b>	3 semesters (1.5 years)
<b>Accreditation</b>	ASIIN e.V. 2018
<b>Numerus clausus</b>	No

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## More information about this degree course

### Admission requirements

Professional university degree (Diploma, Bachelor (210 CP)) in the area of technology or science.

Please note:

Foreign applicants have [special admission requirements and a different process of application](#).

### Language of instruction

The language of instruction in all the THB degree courses is GERMAN. Individual modules are taught in English. A prerequisite for studying here is knowledge of German at C1 level, which must be proven with a certificate before enrolment, e.g. DSH, TestDaF. THB offers a German course at C1 level for applicants (15 weeks).

### Course profile

Two semesters of specialised knowledge and specialisation in important topics within mechanical engineering in R&D, including scientific project work; Processing of a complex task of modern mechanical engineering in the 3rd semester and completion of the Master's thesis. Project work and the Master's thesis are preferably integrated into the research topics at the THB, but can also be carried out in the development areas of mechanical engineering companies.

The degree course is characterised by:

- Semester-related research projects
- Scientific analysis through calculation, simulation and experimentation
- Method development in the area of system stability and robustness
- Elective modules in the major fields of mechanical engineering and mechatronics

### Career prospects

- Employment in medium and larger enterprises with R&D departments
- Leading and carrying out demanding research and development projects in machine, vehicle and plant construction
- Conception and operating complex systems in manufacturing and process engineering
- Scientific and technical services for safe systems and components under harsh conditions
- Employment in external funds of universities or colleges for participation in research projects including the possibility of doctoral studies

#### **Modules offered**

- Mathematical Optimisation and Stochastics
- Drive Dynamics and Simulation
- Construction, Production Technology and Materials
- System Integration and Control Technology
- Autonomous Mobile Systems
- Finite Element Methods and Lightweight Construction

#### **Projects**

- Design/construction of a transport carriage for wire coils
- Conception of an underwater weapon deterrent system
- Analysis of pipe vibrations in natural gas compressor stations

Photonics (M.Eng.)

#### **Optics // Electronics // Laser technology**

This Master's degree course is realised together with the TH Wildau (FH). The degree course teaches graduates from all technical and scientific disciplines about the field of photonics. It is one of the interdisciplinary high technologies which reflects the fusion of optics/optical technologies, electronics and laser technology. At the same time, photonics is one of the most important pillars of the growing production of microelectronics.

Photonic products include e.g. DVD and Blue-Ray burners, head-up displays, 3-D displays, light-emitting diode light sources or laser material processing systems.

The degree course of photonics provides the necessary knowledge and skills for this. The theoretical knowledge acquired is complemented by an internship which is supervised intensively as well as scientific projects.

<b>Application deadline</b>	for the winter semester: 31.08. at TH Wildau
<b>Degree</b>	Master of Engineering
<b>Form of study</b>	Full-time
<b>Duration</b>	4 semesters (2 years)

<b>Accreditation</b>	Yes (ASIIN e.V.)
<b>Numerus clausus</b>	No

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## More information about this degree course

### Admission requirements

Applicants include graduates of a six semester Bachelor of Engineering. Professional relevance must be proven with exam results.

After successfully passing the placement examination, it is possible to be assigned to a higher subject-based assessment if a degree course with a correspondingly longer study duration of at least 7 semesters and a higher number of at least 210 ECTS credits have been verified.

Enrolment takes place through the University of Applied Sciences Wildau.

### Course profile

Laboratory exercises and projects in small groups, in the practical phase students work in engineering teams on development projects, modern laboratories with state-of-the-art laser measurement equipment, additional qualifications possible (e.g. business administration, law, company formation)

- 1st semester: Lectures (15 weeks)
- 2nd semester: Lectures (15 weeks)
- 3rd semester: Lectures (15 weeks)
- 4th semester: Research seminar, Master's thesis, final exam

### Career prospects

- Information and communications technology
- Material processing
- Production engineering
- Medical engineering
- Equipment engineering
- Measurement engineering
- Print engineering
- Biotechnology
- Research

### Modules offered

- Structure of Matter



- Measuring and Analysis Methods
- Physical/Optical Technologies
- Micro Technologies
- Mathematical Methods
- Subject-Specific Specialisation
- Optical Measuring and Analytical Methods
- Theoretical Physics
- Optical Device Construction 1
- Optical Device Construction 2
- New Developments in Photonics
- R&D projects
- Business Subjects
- Master's Thesis

## **References/partners**

Industry cooperation

Security Management (M.Sc.)

## **Information security // Data protection // IT Security**

Welcome to the postgraduate Master of Security Management at Brandenburg University of Applied Sciences. The Master's degree course is aimed at people with a university or college degree course who want to gain additional scientific qualifications in the field of security and IT security.

Requirements:

- Successfully completed first degree course,
- One-year working in a security-related area as well as
- Sufficient English language skills (B2 level with proof).

Our professors and lecturers are usually security officers from the industry. This enables us to replicate later career profiles very accurately at a high academic level. Through elective modules, a project, the term papers as well as the Master's thesis, profiles in the specialisation areas of the degree course can be developed. We offer the following profile directions:

- Information security,
- Forensics,
- Building, plant and personal safety,
- Business continuity and crisis management,
- IT and cyber security, and
- Banking security.

The degree course in Security Management is organised in such a way that it can also be completed part-time whilst working.

The attendance phases are on Friday, Saturday and Monday respectively and are limited to the semester periods (32 weeks in the year). The study duration is 3 semesters for full-time study and 6 semesters for part-time study. Enrolment takes place in the winter and summer semester.

Application deadline	Winter Semester: 31.08. and Summer Semester: 15.02.
Degree	Master of Science
Form of study	Full-time, part-time, part-time whilst working
Duration	3 semesters (1.5 years), part-time 6 semesters (3 years)
Accreditation	Yes (FIBAA)
Numerus clausus	No

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## **More information about this degree course**

### **Unique characteristics of the degree course**

The Master of Security Management is unique within the German-speaking countries. What makes us say that?

With our curriculum, students are taught a mixture of management and technological competences. This orientation allows us to award a Master of Science. The contents were developed together with cooperating companies and are oriented toward practical needs. Without IT security, corporate security can no longer be established today. Despite this, we are not a purely IT security degree course. Holistically, our focus is on the organisational security of companies.

Our degree course is aimed at professionals who are able to study. The attendance dates are on Fridays, Saturdays and Mondays. The part-time study allows us to realise individual and flexible study schedules.

Our students are taught by teachers from the field. Our honorary professors include:

The lecturers teaching our elective courses come from renowned management consultancies, among others.

We have research intensive professors who are responsible for the scientific foundation of teaching and include new approaches and topics from current projects.

And last but not least, it is our aspiration to offer an affordable degree course. Since our cooperation partners provide some of the teaching staff, we can offer the degree course for a reasonable €485 per semester.

### **Application and enrolment**

We offer a practical university degree course for professionals. One of the ways we achieve this is by organising the degree course in blocks and choosing our teaching staff.

The prerequisite for applying for the degree course is a Bachelor's degree or a relevant qualification equivalent to a Bachelor's degree under higher education law from a field such as safety management, computer science, business information technology, electrical

engineering, law or business administration.

In addition, candidates must be able to demonstrate at least one year of practical experience in the field of business, IT, or building security or with public authorities and organisations with security responsibilities (BOS). It is also necessary to have proof of sufficient knowledge of English (see Study and Examination Regulations Section 5).

A higher education committee decides on admissions in the case of applications from graduates with a different professional background or in case of non-fulfilment of one of the above-mentioned requirements.

You can enrol in the Security Management degree course for [the winter semester or the summer semester](#).

Please note:

Foreign applicants have [special admission requirements and a different process of application](#)

### **Language of instruction**

The language of instruction in all the THB degree courses is GERMAN. Individual modules are taught in English. A prerequisite for studying here is knowledge of German at C1 level, which must be proven with a certificate before enrolment, e.g. DSH, TestDaF. THB offers a German course at C1 level for applicants (15 weeks).

### **Contents of the degree course**

Security Management is a Master's degree course which adopts a holistic approach to the production and organisation of "security". As a result, both management and technology-oriented knowledge are taught.

The THB can thus offer training that covers IT security but is not limited to IT security. The range of subjects is much broader and includes the competences of the various other disciplines represented at the university. The degree course contents represent a well-balanced and sophisticated combination of technical and organisational units as well as comprehensive management competence. The courses are divided into four main topics:

- Security Management
- ICT Security
- Mathematical and Physical Fundamentals (Network Security, Cryptography and Forensics)
- Law and Business Administration

The Master of Security Management comprises three semesters of 30 ECTS each (a total of 90 credits according to the European Credit Transfer System) and six semesters with 15 ECTS each for part-time study. 30 credits will additionally be recognised for one year of

professional experience.

The following emphases or profile directions can be selected and are shown on the Master's certificate:

- Information Security,
- Forensics,
- Building, Plant and Personal Safety,
- Business Continuity and Crisis Management,
- IT and Cyber Security,
- Banking Security and
- Nuclear Security.

Profiling takes place through the allocation of appropriate compulsory elective modules as well as the Master's thesis. The following is an excerpt from the catalogue of our elective modules:

- Technical Aspects of IT Forensics
- Social Engineering
- IT Infrastructure Library (ITIL)
- Information Security Management Systems (ISMS)
- Business Continuity Management Lifecycle
- Secure Software Lifecycle Management (SSLM)
- Payment Card Industry Data Security Standard (PCI DSS)
- Risk Analysis and Risk Management
- Know-How Protection in Business
- Security of Computer Centres
- Awareness
- Predictive Analytics
- Data Protection in the Networked World
- Cyberwar

In addition to the technical elements, scientific methodological competences are further developed through the semester papers, the project and, of course, the Master's thesis.  
□More information about the course contents can be found in the module catalogues.

### **Lecturers in the Master of Security Management**

Practical teaching is made possible through the collaboration of university professors, honorary professors and other teachers from the cooperation companies and networks.

Technology and Information Management and Entrepreneurship (M.Sc.)

### **Interdisciplinary // Flexible // Compact**

Learning to open up new business areas with technological innovations - that is the aim of the Master of Technology and Innovation Management (TIM).

Technology and innovation managers work at the interface between technology and business, for example in interdisciplinary research and development teams or as technology consultants. They identify new opportunities in the market and technology trends, secure technological competencies and professionally direct innovation processes and projects in companies.

This Master's degree course is aimed at undergraduate and graduate students of engineering and natural sciences, computer science and industrial engineering. It is interdisciplinary and complements the technical knowledge acquired in the Bachelor's degree course with the methods and know-how of economics.

Application deadline	Winter semester: 31.08. and summer semester: 15.02.
Degree	Master of Science
Form of study	Full-time
Duration	3 semesters (1.5 years for a full-time study), 5 semesters (2.5 years for part-time study)
Accreditation	Yes (FIBAA)
Numerus clausus	No

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## More information about this degree course

### Career prospects

**Typical field of work** for technology and innovation managers include:

- Product innovation management
- R&D management
- Project management (innovation projects)
- Technical marketing, technical sales
- Technical controlling
- Economic development/technology transfer
- Consulting/technology consulting

### Admission requirements

You should meet the following essential requirements in order to be admitted to the Master of Technology and Innovation Management:

You have a **first professional higher education degree** (at least Bachelor or equivalent) in the field of

- Engineering,
- Natural sciences,
- Informatics or
- Industrial Engineering

as well as **adequate language skills**

- English of an upper intermediate level (e.g. IELTS 6.0, TOEFL 213 computer-based or equivalent)
- Additionally, German for foreign applicants at level C1 (e.g. TestDAF, DSH or equivalent)

Please note:

Foreign applicants have [special admission requirements and a different process of application](#).

### **Language of instruction**

The language of instruction in all the THB degree courses is GERMAN. Individual modules are taught in English. A prerequisite for studying here is knowledge of German at C1 level, which must be proven with a certificate before enrolment, e.g. DSH, TestDaF. THB offers a German course at C1 level for applicants (15 weeks).

### **Contents of the degree course**

The Master of Technology and Innovation Management has a modular structure and is divided into **four subject areas**:

- Technology and Innovation Management
- Economic basis
- Soft skills and management competencies
- Individual focus through a freely selectable elective subject

The third semester is dedicated to writing of the Master's thesis.

The module board and the module catalogue for the Master of Technology and Innovation Management can be downloaded here.

### **Internationality/study abroad**

Our Master of Technology and Innovation Management students come **from all over the world** to study at the Brandenburg University of Applied Sciences. As a result, you can already experience internationality during your studies here.

We are very happy for students to spend part of their studies abroad and would like to support them in this. Our study and examination regulations for TIM open up a **mobility window** in the 2nd semester, which is recommended for **study abroad**.

At the THB you will find competent contact persons who would be pleased to help you organise your study abroad!

Alle öffnen Alle schließen